

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Hidenari Ota
Serial Number: 10/541,430
Filed: July 5, 2005
For: MACHINE TOOL FACILITY EQUIPPED WITH A PALLET EXCHANGER
Art Unit: 3722
Examiner: Erica E. Cadigan
Atty doc: 235-05
Confirmation: 6253
(order no): (6173)

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is a response to a final Office Action dated February 5, 2008, to which a response is due on or before May 5, 2008. Applicant adopts the Examiner's previously proposed suggestions recited in the Interview Summary dated February 26, 2007. The amendments herein are now consistent with the proposed Examiner's Amendment, a copy of which is attached as "Exhibit A".

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Remarks on Election of Species and Identification of Claims:

Claim 3 has been withdrawn from consideration pending the allowance of a generic claim from which it can depend. Claims 1-2, and 4-6 stand rejected, and are each being amended into what is believed to be allowable form. It is believed that claim 3 can now be reinserted as depending from allowable claim 1 or 2.

In the claims: Amend the claims as follows

1.(currently amended) A machine tool facility equipped with a pallet exchanger for automatically exchanging pallets mounted on a table or on a pallet-mounting plate, comprising:

a machine tool having a main spindle supported to rotate about a horizontal axis and for mounting a tool on the front end thereof, and a the table or a the pallet-mounting plate facing the front surface of the main spindle and for detachably attaching a pallet to a vertical surface of said the table or of a pallet-mounting face plate, the machine tool being designed to machine a workpiece fixed to a vertical work-attachment surface of the said pallet; and

wherein said the pallet exchanger has having a base provided neighboring the table or the pallet-mounting plate and serving as a base plate for the pallet exchanger, a pallet support member provided on the base so as to rotate about a vertical axis thereof in an indexing manner, having at least two vertical pallet-mounting surfaces on each of which a distinct and detachably mounting the pallet can be removably mounted, and pallet-moving means for moving the pallet, in a vertical state wherein the vertical work attachment surface remains vertical, between the table or the pallet-mounting plate and the pallet support member to exchange the pallets; and

at least one pallet stocker provided near the pallet exchanger to detachably hold at least one of the pallets in the vertical state, and wherein the at least one pallet is moved in the vertical state by using the pallet-moving means so as to exchange the at least one pallet between the at least one pallet stocker and the pallet support member.

2.(currently amended) The machine tool facility as set forth in claim 1, wherein said table or pallet-mounting plate has an extension, and wherein the pallet support member of the pallet exchanger has a pallet-moving side and is disposed at a position on said an extension of the

table or the pallet-mounting plate in a horizontal direction at right angles with the axis of the main spindle, and the pallet-mounting surface of the pallet support member on the a pallet moving side is constituted to be in parallel with the pallet-mounting surface of the table or the pallet-mounting plate.

3.(currently amended - reinsertion requested) The machine tool facility as set forth in claim 1 or 2, further comprising ~~at least one pallet stocker provided near the pallet exchanger to detachably hold a pallet in a vertical state, and to move wherein the movement of the at least one pallet in a the vertical state between the at least one pallet stocker and the pallet support member occurs by using the pallet-moving means in the a radial direction for a turning of a rotary circle of motion of the pallet support member so as to exchange the pallet relative to the pallet support member.~~

4.(currently amended) The machine tool facility as set forth in claim 1, also including ~~wherein the base of the pallet exchanger travels on a track laid in a horizontal direction at right angles with the pallet-mounting surface of the table or the pallet-mounting plate wherein the base of the pallet exchanger travels on said track in said horizontal direction, said the at least one pallet stocker each detachably holding a the at least one pallet in the vertical state is disposed near the track and, after the pallet support member and said at least one pallet stocker are aligned with each other, the at least one pallet is moved in the vertical state and is exchanged between the pallet support member and the at least one pallet stocker by the pallet-moving means.~~

5.(currently amended) The machine tool facility as set forth in claim 4, wherein a plurality of machine tools are arranged on one side or on both sides of the track, and the pallets are

moved in the vertical state and are exchanged between a plurality of the pallet stockers and the plurality of machine tools by the pallet exchanger traveling on the track.

6.(currently amended) The machine tool facility as set forth in ~~claim 4-claim 1~~, wherein the pallet exchanger can be mounted on either a fixed-type base with which the pallet support member and the pallet moving means are used by being fixed onto the floor, or on a traveling-type base and the pallet support member and the pallet-moving means are used while traveling on the a track.

Remarks:

Claim 3 has been withdrawn from consideration. However, applicant has amended both claims 1 and 2 into what is now considered to be allowable condition by following the Examiner's proposed suggestions of a previous telephone interview and a proposed Examiner's Amendment (Exhibit "A"). It is urged that claim 3 as also amended herein can be reinserted into the application as a dependent claim.

Claims 1-2 and 4-6 stand rejected under 35 USC 112, second paragraph, as being indefinite. The claims have been amended per the Examiner's suggestions. It is urged that the standing 35 USC 112 rejection has now been overcome.

It is noted that the terminal disclaimer with respect to application serial number 10/544,192 has been accepted and made of record.

Claims 1-2 stand rejected under 35 USC 102(f) as being anticipated by Kikuchi, US publication number 2006/0130311. US patent publication number 2006/0130311 is in fact application serial number 10/544,192. The assignee of the entire interest of application serial number 10/544,192 is the assignee of the entire interest of the present application. Compare REEL/FRAME 017543/0889 to REEL/FRAME 018125/0898. The terminal disclaimer executed on behalf of the assignee of both inventions has been accepted and entered, said terminal disclaimer being recited on the form approved and provided by the Commissioner (form PTO/SB/25). Thus, a rejection under 35 USC 102(f) is now inappropriate.

None-the-less, claim 1 is being further amended herein, in accordance with the proposed Examiner's Amendment cited above. The amendment to claim 1 now renders moot the double patenting considerations of applicant's claims, and it also distinguishes assignee's present invention over assignee's (Kikuchi) reference invention. Dependent claims 2 and 4-6 likewise distinguish the present invention over the cited reference.

Claims 1-2 and 4-6 also stand rejected under 35 USC 102(b) as anticipated by Geiger et

al. (WO 02/00388) as understood by the English equivalent US patent 6,826,821.

Claims 1-2 and 4-6, as presented herein, in accordance with the remarks cited above, likewise distinguish the present invention over the Geiger et al. reference as read in US patent 6,826,821.

This Amendment presents no new issues and requires no new considerations or search. Should any procedural matter arise, the Examiner is invited to telephone applicant's undersigned attorney.

No additional fees are believed to be required. In the event that an additional fee is required with respect to this communication, the Commissioner is hereby authorized to charge any additional fees, or credit any overpayment, to Paul & Paul Deposit Account No. 16-0750.
(order no. 6173)

Respectfully submitted,
Paul & Paul

Date: April 24, 2008

/john j. simkanich, regis. no. 26036/
by: John J. Simkanich
Regis. No. 26,036
2000 Market Street, Suite 2900
Philadelphia, PA 19103
(215) 568-4900
FAX 215-567-5057

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PAUL & PAUL
by: John J. Simkanich

/john j. simkanich, regis. no. 26036/
(signature)



UNITED STATES PATENT AND TRADEMARK OFFICE

ATTACHMENT TO
INTERVIEW
SUMMARY

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Fax Cover Sheet

Date: 26 Feb 2007

To: Mr. John McNulty	From: Erica E. Cadigan
Application/Control Number: 10/541,430	Art Unit: 3722
Fax No.: 215 567-5057	Phone No.: (571) 272-4474
Voice No.: 215-568-4900	Return Fax No.: (571) 273-8300 (official)
Re: docket no. 235-05	CC:

Urgent For Review For Comment For Reply Per Your Request

Comments:

Proposed Examiner's Amendment, as mentioned in our telephone conversation earlier today. As discussed, if at all possible, I would appreciate a response by Wed. afternoon/Thursday morning.

Please let me know if there are any questions.

Thank you,

Erica Cadigan
Primary Examiner
Art Unit 3722

Number of pages 6 including this page

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EXHIBIT "A"

Proposed EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with *** on ***.

The application has been amended as follows:

Claim 1 (Currently Amended). A machine tool facility equipped with a pallet exchanger for automatically exchanging pallets mounted on a table or on a pallet-mounting plate, comprising:

a machine tool having a main spindle supported to rotate about a horizontal axis and for mounting a tool on the front end thereof, and [a] the table or [a] the pallet-mounting plate facing the front surface of the main spindle and for detachably attaching a pallet to a vertical surface of the table or pallet-mounting face plate, the machine tool being designed to machine [the] a work fixed to a vertical work-attachment surface of the pallet; [and]

[a] the pallet exchanger having a base provided neighboring the table or the pallet-mounting plate and serving as a base plate for the pallet exchanger, a pallet support member provided on the base so as to rotate about a vertical axis thereof in an indexing manner, having at least two vertical pallet-mounting surfaces and detachably mounting the pallet, and pallet-moving means for moving the pallet, in a vertical state wherein the vertical work attachment

surface remains vertical, between the table or the pallet-mounting plate and the pallet support member to exchange the pallets; and

at least one pallet stocker provided near the pallet exchanger to detachably hold at least one of the pallets in the vertical state, and wherein the at least one pallet is moved in the vertical state by using the pallet-moving means so as to exchange the at least one pallet between the at least one pallet stocker and the pallet support member.

Claim 2 (Currently Amended). The machine tool facility as set forth in claim 1, wherein the pallet support member of the pallet exchanger is disposed at a position on an extension of the table or the pallet-mounting plate in a horizontal direction at right angles with the axis of the main spindle, and the pallet-mounting surface of the pallet support member on [the] a pallet moving side is constituted to be in parallel with the pallet-mounting surface of the table or the pallet-mounting plate.

Claim 3 (Currently Amended). The machine tool facility as set forth in claim 1 or 2, [further comprising at least one pallet stocker provided near the pallet exchanger to detachably hold the pallet in a vertical state, and to move] wherein the movement of the at least one pallet in [a] the vertical state between the at least one pallet stocker and the pallet support member occurs by using the pallet-moving means in [the] a radial direction of [the] a rotary circle of motion of the pallet support member [so as to exchange the pallet relative to the pallet support member].

Claim 4 (Currently Amended). The machine tool facility as set forth in claim 1, wherein the base of the pallet exchanger travels on a track laid in a horizontal direction at right angles with the pallet-mounting surface of the table or the pallet-mounting plate, the at least one pallet stocker detachably holding the at least one [pallets] pallet in the vertical state is disposed near the

track and, after the pallet support member and the at least one pallet stocker are aligned with each other, the at least one pallet is moved in the vertical state and is exchanged between the pallet support member and the at least one pallet stocker by the pallet-moving means.

Claim 5 (Currently Amended). The machine tool facility as set forth in claim 4, wherein a plurality of machine tools are arranged on one side or on both sides of the track, and the pallets are moved in the vertical state and are exchanged between a plurality of the pallet stockers and the plurality of machine tools by the pallet exchanger traveling on the track.

Claim 6 (Currently Amended). The machine tool facility as set forth in claim 1, wherein the pallet exchanger can be mounted on either a fixed-type base with which the pallet support member and the pallet moving means are used by being fixed onto the floor, or on a traveling-type base and the pallet support member and the pallet-moving means are used while traveling on [the] a track.

Firstly, Examiner notes that searching uncovered U.S. Patent Publication 2006/0130311 to Kikuchi, which is a publication of application no. 10/544,192. It is noted that Mr. McNulty is also the attorney of record in that case, and that said case, while having a completely different inventive entity, is assigned to the same assignee as the present case.

That being said, the last paragraph addition to independent claim 1 above would preclude any sort of obvious-type double patenting rejection of claims 1-2, as well as the rejections of at least claims 1-2 under 35 USC 102(f) and/or (g) based on the aforedescribed '192 application (see the flow chart in MPEP section 801, for example, regarding such issues between copending

applications wherein the inventive entity is different, but the assignee is the same, as well as MPEP section 2137, for example).

Additionally, WO 02/00388 to Geiger et al has a publication date of January 3, 2002, and is thus available as prior art under 35 USC 102(b) against the claims. WO '388 is not in the English language. However, U.S. Pat. No. 6,826,821 to Geiger et al. is in the same patent family, and is being relied upon as an English equivalent to the WO '388 reference. Thus, all references to column and line numbers herein are with respect to the '821 patent.

Geiger teaches a machine tool system including a plurality of machine tools 36 (36a-36f) laid out in various configurations (see Figures 4 and 14, for example; Figure 1 shows a detail of an individual machine tool 36). Note that Geiger teaches a machine tool having a horizontal main spindle 10 having a tool 16 mounted at a front end thereof, and "table" or "pallet-mounting plate" 26/29 is mounted "facing" the front surface of the spindle 10, and detachably mounts a "pallet" 31 which has a vertical surface to/on which a workpiece 15 is affixed (see Figures 1, 7, noting that Figure 7 shows the table/pallet-mounting plate 26/29 positioned facing the spindle 10, noting also that 26 is a turntable device for rotating member 29 about a vertical axis.

Additionally, note that Geiger teaches various embodiments of a supply and take-down equipment arrangement or "pallet exchanger" 41, 61, 72 (see Figures 1 and 8-14) which are used to deliver a pallet 31 to or remove a pallet 31 from a desired machine tool 36a-f (see especially figures 4 and 14), and which pallet exchangers travel along a "track" 38 from one machine tool to another, and back and forth from a "pallet stocker" area 59/60, see Figure4, for example, also col. 5, lines 7-21, for example. For example, "pallet exchanger" 61 is shown in Figures 8-12,

and has a “base”, such as, for example, element 42 (other elements could likewise or alternatively be considered a “base” as broadly claimed), a “pallet support member” including, for example, at least element 55 (see Figures 9-12) which rotates about vertical axis 68 “in an indexing manner” (see col. 6, lines 2-26, for example, and especially note the pivoting or rotating motion as illustrated in Figures 10-12, which illustrate the rotation movement of 55 about the vertical pivot axis 68, described specifically as vertical in col. 6, line 11). Further note that the “pallet support member”, which includes at least element 55, includes “at least two vertical pallet-mounting surfaces”, such as the vertical pallet gripping surfaces on the gripper jaws 56 of element 55 (note that in Figure 9, axis 68 is the vertical rotation axis, and that jaws 56 have pallet gripping surfaces that are parallel to that axis). Additionally, re the claimed “pallet moving means”, note that the motor 69 and gearbox 66 are used to perform the rotation motion of 55 about the vertical axis 68, and are thus considered to be the claimed “pallet-moving means for moving the pallet (31), in a vertical state”, between the table/pallet-mounting plate 26/29 and the “pallet support member” including at least 55 to thereby exchange the pallets (see Figures 8-14 and col. 6, lines 2-26).